

## **AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of the Claims:**

1. (Previously presented): A pharmaceutical composition comprising an amount of a purified molecular complex effective for treatment or inhibition of cancer or a tumor, and a pharmaceutically acceptable carrier, said molecular complex comprising an alpha (2) macroglobulin polypeptide noncovalently associated with an antigenic molecule which displays the antigenicity of an antigen overexpressed in a cancer cell relative to its expression in a noncancerous cell of said cell type, with the proviso that the antigenic molecule is other than prostate-specific antigen, wherein the alpha (2) macroglobulin polypeptide comprises the alpha (2) macroglobulin receptor binding domain.

2-6. (Canceled)

7. (Previously presented): A purified molecular complex comprising an alpha (2) macroglobulin polypeptide noncovalently associated with an antigenic molecule which displays the antigenicity of an antigen overexpressed in a cancer cell relative to its expression in a noncancerous cell of said cell type, with the proviso that the antigenic molecule is other than prostate-specific antigen, wherein the alpha (2) macroglobulin polypeptide comprises the alpha (2) macroglobulin receptor binding domain.

8. (Currently Amended): A purified population of molecular complexes which are at least 65% noncovalent complexes, each noncovalent complex comprising of (i) an alpha (2) macroglobulin polypeptide which comprises the alpha (2) macroglobulin receptor binding domain, and (ii) an antigenic molecule which displays the antigenicity of an antigen overexpressed in a cancer cell relative to its expression in a noncancerous cell of said cell type, with the proviso that the antigenic molecule is other than prostate-specific antigen.

9. (Currently Amended): A purified population of molecular complexes purified from a recombinant cell, wherein said molecular complexes are at least 65% noncovalent complexes, each noncovalent complex comprising of (i) an alpha (2) macroglobulin and (ii) an antigenic molecule.

10-39. (Canceled)

40. (Previously Presented): The purified molecular complex of Claim 7, wherein the alpha (2) macroglobulin polypeptide and/or the antigenic molecule are chemically synthesized or recombinantly produced.

41. (Canceled)

42. (Previously presented): The pharmaceutical composition of Claim 1 comprising an amount of a purified molecular complex effective for treatment or inhibition of a fibrosarcoma, myxosarcoma, liposarcoma, chondrosarcoma, osteogenic sarcoma, chordoma, angiosarcoma, endotheliosarcoma, lymphangiosarcoma, lymphangioendotheliosarcoma, synovioma, mesothelioma, Ewing's tumor, leiomyosarcoma, rhabdomyosarcoma, colon carcinoma, pancreatic cancer, breast cancer, ovarian cancer, prostate cancer, squamous cell carcinoma, basal cell carcinoma, adenocarcinoma, sweat gland carcinoma, sebaceous gland carcinoma, papillary carcinoma, papillary adenocarcinomas, cystadenocarcinoma, medullary carcinoma, bronchogenic carcinoma, renal cell carcinoma, hepatoma, bile duct carcinoma, choriocarcinoma, seminoma, embryonal carcinoma, Wilms' tumor, cervical cancer, testicular tumor, lung carcinoma, small cell lung carcinoma, bladder carcinoma, epithelial carcinoma, glioma, astrocytoma, medulloblastoma, craniopharyngioma, ependymoma, pinealoma, hemangioblastoma, acoustic neuroma, oligodendroglioma, meningioma, melanoma, neuroblastoma, retinoblastoma, acute lymphocytic leukemia, myeloblastic, promyelocytic, myelomonocytic, monocytic, erythroleukemia, chronic myelocytic, leukemia, chronic lymphocytic leukemia, polycythemia vera, Hodgkin's disease lymphoma, non-Hodgkin's disease lymphoma, multiple myeloma, Waldenström's macroglobulinemia, or heavy chain disease.

43. (Previously presented): A pharmaceutical composition comprising an amount of a purified molecular complex effective for treatment or inhibition of an infectious disease and a pharmaceutically acceptable carrier, said molecular complex comprising an alpha (2) macroglobulin polypeptide, which comprises the alpha (2) macroglobulin receptor binding domain, said polypeptide noncovalently associated with an antigenic molecule which displays the antigenicity of an antigen of an infectious agent of the infectious disease, with the proviso that the infectious agent is other than hepatitis type B virus.

44. (Previously presented): A purified molecular complex comprising an alpha (2) macroglobulin polypeptide, comprising the alpha (2) macroglobulin receptor binding domain,

said polypeptide noncovalently associated with an antigenic molecule that displays the antigenicity of an antigen of an infectious agent of the infectious disease, with the proviso that the infectious agent is other than hepatitis type B virus.

45. (Previously presented): The purified molecular complex of Claim 43 or 44, wherein the antigenic molecule is an antigen of an infectious agent of the infectious disease.

46. (Previously presented): The pharmaceutical composition of Claim 43 comprising an amount of a purified molecular complex effective for treatment or inhibition of an infectious disease, wherein the infectious disease is caused by a pathogen of adeno-associated virus, cytomegalovirus, papilloma virus, polyoma viruses, SV40, herpes simplex type I (HSV-I), herpes simplex type II (HSV-II), Epstein-Barr virus, variola (smallpox), vaccinia virus, human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), human T-cell lymphotropic virus type I (HTLV-I), human T-cell lymphotropic virus type II (HTLV-II), influenza virus, measles virus, rabies virus, Sendai virus, poliomyelitis virus, coxsackieviruses, rhinoviruses, reoviruses, rubella virus (German measles) Semliki forest virus, arboviruses, hepatitis type A virus, *Streptococcus pyogenes*, *Streptococcus pneumoniae*, *Neisseria gonorrhoea*, *Neisseria meningitidis*, *Corynebacterium diphtheriae*, *Clostridium botulinum*, *Clostridium perfringens*, *Clostridium tetani*, *Haemophilus influenzae*, *Klebsiella pneumoniae*, *Klebsiella ozaenae*, *Klebsiella rhinoscleromatis*, *Staphylococcus aureus*, *Vibrio cholerae*, *Escherichia coli*, *Pseudomonas aeruginosa*, *Campylobacter* (*Vibrio*) *fetus*, *Campylobacter jejuni*, *Aeromonas hydrophila*, *Bacillus cereus*, *Edwardsiella tarda*, *Yersinia enterocolitica*, *Yersinia pestis*, *Yersinia pseudotuberculosis*, *Shigella dysenteriae*, *Shigella flexneri*, *Shigella sonnei*, *Salmonella typhimurium*, *Salmonella typhi*, *Treponema pallidum*, *Treponema pertenue*, *Treponema caratenum*, *Borrelia vincentii*, *Borrelia burgdorferi*, *Leptospira icterohemorrhagiae*, *Mycobacterium tuberculosis*, *Toxoplasma gondii*, *Pneumocystis carinii*, *Francisella tularensis*, *Brucella abortus*, *Brucella suis*, *Brucella melitensis*, *Mycoplasma* spp., *Rickettsia prowazeki*, *Rickettsia tsutsugumushi*, *Chlamydia* spp., *Helicobacter pylori*, *Entamoeba histolytica*, *Trichomonas tenax*, *Trichomonas hominis*, *Trichomonas vaginalis*, *Trypanosoma gambiense*, *Trypanosoma rhodesiense*, *Trypanosoma cruzi*, *Leishmania donovani*, *Leishmania tropica*, *Leishmania braziliensis*, *Pneumocystis pneumonia*, *Plasmodium vivax*, *Plasmodium falciparum*, or *Plasmodium malaria*.

47. (Currently Amended): A purified population of molecular complexes which

are at least 65% noncovalent complexes, each noncovalent complex comprising of (i) an alpha (2) macroglobulin polypeptide, which comprises the alpha (2) macroglobulin receptor binding domain, and (ii) an antigenic molecule that displays the antigenicity of an antigen of an infectious agent of the infectious disease, with the proviso that the infectious agent is other than hepatitis type B virus.

48. (Previously presented): The pharmaceutical composition of claim 1 or 43, further comprising one or more adjuvants.

49. (Previously presented): The pharmaceutical composition of claim 48, wherein the adjuvant is aluminum hydroxide, aluminum phosphate, calcium phosphate, lysolecithin, pluronic polyols, polyanions, peptides, oil emulsions, keyhole limpet hemocyanins, and dinitrophenol, cytokines, saponins, muramyl dipeptides, tripeptide derivatives, CpG dinucleotides, CpG oligonucleotides, monophosphoryl Lipid A, polyphosphazenes, emulsions, liposomes, virosomes, cochleates, Freund's complete adjuvant, Freund's incomplete adjuvant, bacille Calmette-Guerin, or corynebacterium parvum.

50. (Previously presented): The pharmaceutical composition of Claim 1, wherein the antigenic molecule is a tumor specific antigen or a tumor-associated antigen.

51. (Previously presented): The purified molecular complex of Claim 7, wherein the antigenic molecule is a tumor specific antigen or a tumor-associated antigen.

52. (Previously presented): The purified population of molecular complexes of Claim 8, wherein the antigenic molecule is a tumor specific antigen or a tumor-associated antigen.

53. (Previously presented): The purified population of molecular complexes of Claim 9, wherein the antigenic molecule is a tumor specific antigen or a tumor-associated antigen.

54. (Previously presented): The pharmaceutical composition of Claim 1, wherein said molecular complex consists essentially of (i) the alpha (2) macroglobulin polypeptide, and (ii) the antigenic molecule.

55. (Previously presented): The purified molecular complex of Claim 7, wherein said molecular complex consists essentially of (i) the alpha (2) macroglobulin polypeptide,

and (ii) the antigenic molecule.

56. (Previously presented): The purified population of molecular complexes of Claim 8, wherein said noncovalent complexes consist essentially of (i) the alpha (2) macroglobulin polypeptide, and (ii) the antigenic molecule.

57. (Previously presented): The purified population of molecular complexes of Claim 9, wherein said noncovalent complexes consist essentially of (i) the alpha (2) macroglobulin polypeptide, and (ii) the antigenic molecule.

58. (Previously presented): The pharmaceutical composition of Claim 43, wherein said molecular complex consists essentially of (i) the alpha (2) macroglobulin polypeptide, and (ii) the antigenic molecule.

59. (Previously presented): The purified molecular complex of Claim 44, wherein said molecular complex consists essentially of (i) the alpha (2) macroglobulin polypeptide, and (ii) the antigenic molecule.

60. (Previously presented): The purified population of molecular complexes of Claim 47, wherein said noncovalent complexes consist essentially of (i) the alpha (2) macroglobulin polypeptide, and (ii) the antigenic molecule.

61. (Previously presented): A pharmaceutical composition comprising the purified molecular complex of Claim 7, and a pharmaceutically acceptable carrier.

62. (Previously presented): A pharmaceutical composition comprising the purified population of molecular complexes of Claim 8 or 9, and a pharmaceutically acceptable carrier.

63. (Previously presented): The pharmaceutical composition of Claim 61, wherein the antigenic molecule is a tumor specific antigen or a tumor-associated antigen.

64. (Previously presented): The pharmaceutical composition of Claim 62, wherein the antigenic molecule is a tumor specific antigen or a tumor-associated antigen.